

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 17-23 (canceled).

24. (new) A device for discriminating nuclear fuels in an installation comprising a sub-adjacent structure provided with storage cells immersed in a water filled bay, the device comprising a waterproof casing containing a first detector of a first radiation, a second detector of a second radiation, wherein the waterproof casing is adapted to attach to a boom and to securely position itself on a first cell to allow the first detector and the second detector discriminate nuclear fuel in a second adjacent cell, wherein the casing comprises means to attach to the boom, the bottom portion of the casing comprises means for securing the casing to the first cell, and the means for securing comprises lateral teeth that comprise external edges having a taper.

25. (new) A device for discriminating nuclear fuels according to claim 24, whereby the second detectors is a gamma radiation detector located behind two collimators in continuation, comprising a rear collimator, located just in front of the said second detector and opening up onto the whole detection area of a detection body, and a front collimator, with a slot section extended in a transversal direction of a fuel element, and the first detector is a neutron detector.

26. (new) A device for discriminating nuclear fuels according to claim 25, whereby the casing comprises a fixed part bearing the means for attaching it, and a mobile part, that pivots around the fixed part in such a way as to turn the slot a quarter turn or a half turn.

27. (new) A device for discriminating nuclear fuels according to claim 25, whereby the slot has a variable extension dimension and broadens out towards the fuel element.

28. (new) A device for discriminating nuclear fuel in an installation comprising a sub-adjacent structure provided with storage cells immersed in a water filled bay, the device comprising a waterproof casing containing a first detector of a first radiation and a second detector of a second radiation, a shield of the second radiation, wherein the waterproof casing is adapted to attach to a boom, and comprises means located at the base of the casing to securely position itself on a first cell, to allow the first detector and second detector to discriminate nuclear fuel in a second adjacent cell, and wherein the shield comprises a thinner part in front of the first detector and a thicker part in front of the second detector, the first detector is a neutron detector, the second detector is a gamma ray detector, the thicker part of the shield comprises a front colimator extending towards the second detector, the front colimator having a section which is elongated in a transversal direction of a

fuel element, and the means located at the base of the casing to securely position comprises lateral teeth that comprise external edges having a taper.

29. (new) A device according to claim 28, wherein the second detector is surrounded by a shield comprising a rear collimator which is a conoidal having a base with a largest axis extending out in the transversal direction of the rod.

30. (new) A device according to claim 28, wherein the shield surrounding the second detector is slidably contained in the casing.